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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/646,489      | 08/23/2003  | Steven Soar          | 200206930-1         | 9442             |

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EXAMINER

LEE, PATRICK J

ART UNIT

PAPER NUMBER

2878

DATE MAILED: 03/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                               |                              |  |
|------------------------------|-------------------------------|------------------------------|--|
| <b>Office Action Summary</b> | Application No.<br>10/646,489 | Applicant(s)<br>SOAR, STEVEN |  |
|                              | Examiner<br>Patrick J. Lee    | Art Unit<br>2878             |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 August 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>0803</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 & 6-7 are rejected under 35 U.S.C. 102(b) as being anticipated by US 4,931,657 to Houston et al.

With respect to claim 1, Houston et al disclose a first light source (100) located on first side of web (102) as a media and a second light source (200) located on the second side of media (102) (see column 8, lines 24-26). Video camera (104) serves as a detector to detect light transmitted through media by first light source (100) and to detect light reflected off media by second light source (200). Main computer (110) serves as a controller to detect at least one characteristic (intensity of light from the web in order to determine the amount of dirt). The use of a ratio would be inherent into the device as such would allow for the determination of the intensity of light.

With respect to claim 6, the first light source (100) is located normal to the media, while the second light source is aimed at an oblique angle to the media (see figure 7).

With respect to claim 7, Houston et al disclose the disposition of the second light source substantially equal to Brewster's angle (see column 5, lines 22-28), which is solved in accordance with Snell's law.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-5 & 8-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,931,657 to Houston et al.

With respect to claims 2-5, 17, & 23-25, Houston et al discloses the device as described in the discussion of claim 1. However, Houston et al does not explicitly disclose that the first light source (100) and the second light source (200) are operated such that they are turned on and off in succession. To modify the teachings of Houston et al accordingly would have been obvious to one of ordinary skill in the art in order to prevent confusion or additional scattering of light that could cause inconsistencies in the measurements of the characteristics in the media.

With respect to claim 8, Houston et al do not explicitly disclose a phototransistor, but video camera (104) serves as a functional equivalent of a phototransistor as it would be obvious to one of ordinary skill in the art that both are capable of producing images.

With respect to claims 9-10, Houston et al disclose the device to determine the surface texture of the paper in order to determine its printability, but does not explicitly state that it would used to sense what type of media it is whether it be plain paper, bond paper, glossy media, or transparency media. It would be obvious to utilize surface

texture to determine media type because it is one of the distinct measurable characteristics between the different media types.

With respect to claims 11 & 32, Houston et al do not explicitly disclose the edge detecting mechanism, but such would be obvious to one of ordinary skill in the art because the web is moving and it would benefit the operation of the device to accurately determine the characteristic if the device knew when to commence measurement procedures. This would not require both light sources to constantly be turned on, and thus would allow for efficient energy use.

With respect to claims 12-16, 18-20, 22, & 33-35, Houston et al do not explicitly use a code for the media or sheet picking device, but such would be directed to the intended use of the device. It would be obvious to modify the teachings of Houston et al accordingly in order for the device to be used in a printing application.

With respect to claims 21 & 26, the use of the ratio of light to detect the ratio of light is inherent into the device (See discussion of claim 1).

With respect to claims 26-31, Houston et al do not claim the ratios for each media as such, but such modifications would have been obvious to one of ordinary skill in the art to determine the ratios characteristic of each type of media as it would allow for the accurate determination of the type of media.

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 4,540,887 to Minerd et al disclose a high contrast ratio sensor to determine reflectance and transmittance of a paper to be sensed.

US 6,497,179 B1 to Allen et al disclose a method and apparatus for distinguishing transparent media.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick J. Lee whose telephone number is (571) 272-2440. The examiner can normally be reached on Monday through Friday, 8:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Patrick J. Lee  
Examiner  
Art Unit 2878

PJL  
March 1<sup>st</sup>, 2005